

What is claimed is:

1. A vacuum fluorescent display comprising:
  - 2 a front glass member which has light
  - 3 transmission properties at least partly;
  - 4 a substrate opposing said front glass member
  - 5 through a vacuum space;
  - 6 a phosphor film formed on a surface of said
  - 7 front glass member which opposes said substrate and
  - 8 having a predetermined display pattern;
  - 9 an electron-emitting portion mounted on said
  - 10 substrate to oppose said phosphor film and having an
  - 11 electron-emitting surface corresponding to the display
  - 12 pattern;
  - 13 an electron extracting electrode arranged in
  - 14 the vacuum space between said electron-emitting portion
  - 15 and said phosphor film to be spaced apart from said
  - 16 electron-emitting portion by a predetermined distance;
  - 17 and
  - 18 an insulating support member formed on said
  - 19 substrate and adapted to support said electron
  - 20 extracting electrode and divide the electron-emitting
  - 21 surface of said electron-emitting portion into a
  - 22 plurality of regions.
2. A display according to claim 1, wherein said
- 2 insulating support member comprises at least one

3 partition for dividing the electron-emitting surface of  
4 said electron-emitting portion into a plurality of  
5 regions.

3. A display according to claim 2, wherein said  
2 partition comprises partitions that are arranged  
3 substantially equidistantly to be parallel to each other.

4. A display according to claim 3, wherein the  
2 partitions have heights of 0.2 mm to 2.0 mm each and are  
3 arranged at an interval 1/2 to 5 times the height.

5. A display according to claim 2, wherein said  
2 partition divides the electron-emitting surface of said  
3 electron-emitting portion into a plurality of  
4 electron-emitting regions of almost the same shape.

6. A display according to claim 5, wherein the  
2 electron-emitting surface of said electron-emitting  
3 portion is divided into a plurality of stripe regions  
4 parallel to each other.

7. A display according to claim 5, wherein  
2 said insulating support member has an opening  
3 corresponding to the display pattern, and  
4 said partition is integrally formed with said  
5 insulating support member so as to divide the opening

6 into a plurality of slit-like divisional openings.

8. A display according to claim 1, wherein said  
2 electron extracting electrode is formed of a mesh-like  
3 metal plate, and is supported by said insulating support  
4 member to be spaced apart from the electron-emitting  
5 surface by a predetermined distance.

9. A display according to claim 1, wherein said  
2 electron extracting electrode is formed of a conductive  
3 film formed at a top of said insulating support member.

10. A display according to claim 1, wherein said  
2 electron-emitting portion is formed of a large number of  
3 carbon nanotubes formed of cylindrical graphite layers.

11. A display according to claim 1, wherein said  
2 electron-emitting portion comprises  
3 a plate-like metal member having a large  
4 number of through holes and serving as a growth nucleus  
5 for nanotube fibers, and  
6 a coating film formed of a large number of  
7 nanotube fibers formed on a surface of the metal member  
8 and on walls of the through holes.

12. A display according to claim 1, wherein said  
2 electron-emitting portion and said phosphor film

3 comprise a plurality of sets of electron-emitting  
4 portions and phosphor films provided in the vacuum space  
5 in one-to-one correspondence for each display pattern.